Creighton UNIVERSITY
School of Pharmacy and Health Professions
Department of Occupational Therapy

Pediatric Practice: Behavior Model versus Emotional Developmental Model

Theresa Kennelly– Creighton University

BACKGROUND

In occupational therapy (OT) pediatric practice, differing models can be used to provide quality care to young clients diagnosed with Autism Spectrum Disorder (ASD). Two specific models, Applied Behavioral Analysis (ABA) and Differential, Individual-Differences, Relationship (DIR)/ Floortime both provide outpatient pediatric services for this population, but ABA utilizes a behavioral approach, whereas DIR/Floortime utilizes an emotional developmental approach. While DIR/Floortime is an OT-based model, ABA works alongside OT in providing foundational principles that can be utilized in OT care. In Omaha, both approaches are being utilized at separate outpatient clinics, but are treating children with similar diagnoses. Knowing the desired outcomes of ABA and DIR /Floortime, and if similarities and differences exist between the two models can provide a deeper knowledge for therapists, families, and providers about efficacious services available based on either behavior or emotional development for children with ASD.

ABA

- Predominant approach to intervention for children with ASD (Welch & Polatajko, 2016)
- Utilizes learning theories alongside operant conditioning principles (Foxx, 2008)
- Principles: positive reinforcement, discrete trial training, shaping, and fading (Foxx, 2008)
- Address skill acquisition and social communication difficulties in children with ASD (Foxx, 2008)

DIR/Floortime

- **D**evelopmental model focuses on various milestones across development including areas of joint attention, regulation, communication and language, cognition, and social problem solving (Greenspan & Tippy, 2017)
- **I**ndividual differences acknowledges and builds on the way each child process their world (Greenspan & Tippy, 2017)
- **R**elationship recognizes that all humans develop through relationship and it emphasizes the power of change through relating and communicating with children (Greenspan & Tippy, 2017)
- **Floortime** is the technique used to implement DIR principles by following the child and their interests while challenging the child to mastery of higher capacities (Greenspan & Wieder, n.d.)

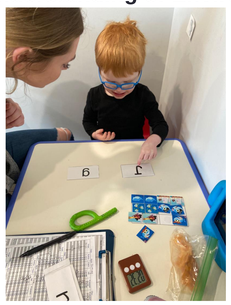
FOCUS QUESTION

What are the differences between an emotional developmental based approach and a behavioral based approach to pediatric occupational therapy? Do any similarities exist between these models?

METHODS

Several methods were used to fully understand the behavioral model and emotional developmental model in the context of an ABA clinic and DIR/Floortime clinic:

Understanding of Environment Through Observation



- ABA: table, token economy/ reward system, recorded data, communication device, skill acquisition programs
- DIR/Floortime: lead by child's interest, sensory input, use child's preferred activities/toys

Observation of ABA Treatment Sessions

- Sessions 3-4 hours x 4-5 times per week, with 25-60 minutes of individual OT sessions incorporated; ABA focus on skill acquisition and socially acceptable behaviors

Implementing OT in ABA Sessions

- Utilizes behavioral principles, implements ABA client specific protocols for behaviors, and data collection of behaviors and maintenance programs
- 1:1 client sessions addressing OT goals in relation to fine motor skills (handwriting, cutting, etc.), activities of daily living (ADLs) (dressing, toothbrushing, feeding)
- Consults with staff to utilize OT principles in ABA client sessions

Implementing DIR/Floortime Sessions

- OT sessions 60-90 minutes x 1-2 times/week, client leads session, occupational therapist utilizes clinical skills to playfully obstructs and challenges child in areas of emotional regulation, fine/gross motor skills, ADLs/ IADLs, and sensory integration
- Telehealth sessions utilizing DIR Floortime model

Video Review in DIR/Floortime

- Video review of evaluations and sessions; increases awareness of client's strengths/ limitations, therapist's awareness of themselves/ own judgments and reactions in client session

Literature Review

- Articles about therapeutic use of self, ASD and behaviorism, ABA and OT, developmental vs. behavioral approach, and emotional regulation

RESULTS

Shared similarities

- Address environment and how it effects the child
- Treat children with similar diagnoses (i.e. ASD) and address similar deficits and limitations

Compared Differences

- Evaluation process

  ABA: Verbal Behavior-Milestones Assessment and Placement Program (VB-MAPP), Assessment of Functional Living Skills (AFLS), and parent interview

  DIR/Floortime: Play and observation based, standardized assessments depend on observed client deficits, observe parent/child interaction; assess environment, relationship, and sensory system

- Parent involvement

  ABA: Meetings 1x/ month to review client's goals/progress; address any parent concerns for child at school or home

  DIR/Floortime: Individual parent sessions to discuss parent's own emotions, judgments and concerns; parent involvement in child's session incorporated

- How emotions and behaviors are addressed

  ABA: Reinforce appropriate behaviors, redirection from negative behaviors to appropriate behaviors to access desired outcomes, protocols to ensure child and therapist safety

  DIR/Floortime: Validate emotion → explore emotion, sensory and emotion drive behavior, use of affect, allow space for all emotions/behaviors

Top Outcomes for ABA and DIR/Floortime

ABA	DIR/Floortime
Socially Relevant Behaviors	Emotional Regulation
Language/ Communication Skills	Relationship
Generalized Skills to Natural Environment	Developmental Milestones
Parent Involvement to Fade Out Services	Sensory Integration

Limitations

- Sample size
- Lack of prior research on ABA compared directly with DIR/Floortime
- Self reported methods and results

BOTTOM LINE FOR OT

ABA Principles and OT

Welch and Polatajko (2016) claim ABA and OT can work together in providing comprehensive treatment by using ABA principles within OT interventions. Using the environment as an antecedent strategy can aid in a child's success in skill acquisition (Welch & Polatajko, 2016). Additionally, using ABA principles in conjunction with sensory strategies can lead to successfully implementing sensory input as a coping skill *prior* to problematic behaviors, rather than as a response to these behaviors (Welch & Polatajko, 2016). Understanding principles of behavior can lead the occupational therapist to educate family on when to provide sensory input. For example using sensory input as a coping mechanism at starting signs of agitation instead of reinforcing problematic behaviors (i.e. hitting self or others) with the use of sensory input *after* the behavior has occurred. Finally, OT can utilize ABA principles such as modeling, cueing, and reinforcement, to develop appropriate behaviors (Case-Smith & Arbesman, 2008).

DIR/Floortime and Understanding the Child

Understanding a child's emotions and functional emotional developmental levels allows parents and caregivers to meet the child at their own processing level while respecting the child's individual differences (Greenspan & Weider, 2003). With the use of affect and entering into their world on their level, the child is able to build relationship and learn how to communicate (Greenspan & Weider, 2003). Occupational therapists can effectively use these concepts to build rapport and relationship with children, honor their autonomy throughout therapy, and validate children's emotions, which is what drives their behavioral response. To conclude, both models possess several principles that can be used to assist occupational therapists in providing effective, high quality care to the young clients they serve.

REFERENCES

Case-Smith, J., Arbesman, M. (2008). Evidence-based review of interventions for autism used in or of relevance to occupational therapy. *American Journal of Occupational Therapy, 62,* 416-429.

Foxx, R. (2008). Applied behavior analysis treatment of autism The stat of the art. *Child and Adolescent Clinics of North America,17,* 821-834. http://10.1016/j.chc.2008.06.007

Greenspan, S., Tippy, G. (2017). Introduction. *Respecting autism, the Rebecca school DIR casebook for parents and professionals* (pp. 3-18). Simon & Brown Publishing.

Greenspan, S., Weider, S. (2003). Developmentally appropriate interactions and practices. *ICDL Clinical Practice Guidelines.* Bethesda, Maryland: The Interdisciplinary Council on Developmental and Learning Disorders.

Greenspan, S., Weider, S. (n.d.) DIR/Floortime model. *The Interdisciplinary council on Developmental and Learning Disorders.* Retrieved from https://www.stanleygreenspan.com/swf/The%20DIR%20Floortime%20Model.pdf

Welch, C., Polatajko, H. (2016). The Issue Is- Applied behavior analysis, autism, and occupational therapy. A search for understanding. *American Journal of Occupational Therapy, 70,* 7004360020. http://dx.doi.org/10.5014